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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)

Revision of the Commission's Rules
to Ensure Compatibility With
Enhanced 911 Emergency Calling
Systems)

) CC Docket No. 94-102

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

To: The Commission

COMMENTS OF THE RURAL TELECOMMUNICATIONS GROUP

The Rural Telecommunications Group ("RTG"), by its attorneys and pursuant to Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission"), submits these Comments in response to the Further Notice of Proposed Rulemaking ("FNPRM") released by the Commission on July 26, 1996.

I. STATEMENT OF INTEREST

RTG is comprised of numerous small rural providers of wireless communications services. As providers of commercial mobile radio service ("CMRS"), RTG's members would be affected by adoption of the FCC's proposal that wireless providers meet certain stringent technical requirements with respect to making their systems compatible with enhanced 911 ("E911") services. Accordingly, RTG appreciates the opportunity to comment on the issues raised by the FNPRM.

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II. COMMENTS

A. The Proposal to Increase the Accuracy of ALI Should Not Apply to Rural Carriers

The FNPRM contains a proposal to require covered carriers to achieve the capabilities necessary to provide to public service answering points ("PSAPs"), after the initial five-year period, information that locates a wireless 911 caller within a radius of 40 feet using longitude, latitude and vertical location data, and that provides this degree of accuracy for 90% of the 911 calls processed. While RTG commends the Commission for its attempt to improve the accuracy of automatic location information ("ALI") techniques in urban environments, such an approach is both impractical and unnecessary in a rural environment.

One of the most common methods of ALI is based on a technique known as triangulation, by which a mobile handset may be located by measuring the amount of time a transmission signal takes to reach three separate points (i.e., cell sites) in a triangular formation. The configuration of wireless systems in most rural environments does not allow for the effective use of triangulation due to the spacing of rural cell sites and other geographic factors. Because of the wide distances between rural cell sites, as well as the existence of uneven terrain and other natural barriers, the use of triangulation in such environments simply cannot produce an ALI result with *any* degree of accuracy, much less the 40 feet, 90% standard proposed by the Commission. Indeed, the Consensus Agreement filed by the Cellular Telecommunications Industry Association and three national public safety organizations (Association of Public-Safety Communications Officials-International, Inc., National Emergency Number Association, and National Association of State Nine One One

Administrators) acknowledged that the since adopted ALI standard of accuracy within 125 meters -- considerably *less stringent* than the 40 feet, 90% standard now proposed by the Commission -- "**may be difficult or impossible to meet**" for some rural carriers.¹ If achieving accuracy within 125 meters (410 feet) is a standard "difficult or impossible" for rural carriers to meet, how can such carriers reasonably be expected to satisfy the far more rigorous requirements proposed by the FNPRM?

In order to comply with the requirements proposed in the FNPRM, RTG members and other rural carriers would be forced to construct additional cell sites at considerable expense. The construction of such additional sites in rural areas would be technically and economically unnecessary, justified neither by the amount of existing or potential demand for wireless service in those areas.

Indeed, not only is the use of ALI in a rural environment impractical, it is totally unnecessary. Callers in rural areas are generally able to describe their location when making an emergency call. While it may be relatively easy to find one's self "lost" in a strange urban environment, in the wide open spaces of rural America it is difficult not to be found. The requirement that vertical accuracy be achieved in rural areas is particularly ludicrous. While such accuracy may well be necessary to locate an emergency caller in skyscraper-filled urban environments, such information is of no value to emergency response personnel in flat, rural landscapes. Moreover, ALI is useless without the existence of a PSAP. 911 and E911 services are not even available in most of the country. In its comments filed earlier in this proceeding, CTIA pointed out that 911 and E911 services remain unavailable to

¹ Consensus Agreement at p. 3 (emphasis added).

approximately 65% of the geographic area comprising the United States, and to 25% of the population.² Accordingly, in most of rural America, there are no PSAPs capable of processing any ALI information that a wireless carrier would provide!

Although RTG recognizes that the Commission's proposal would require rural carriers to meet such stringent standards only where: (1) a request for E911 services has been received from the administrator of a PSAP that is capable of receiving and utilizing the data elements associated with the services; and (2) a mechanism for the recovery of costs relating to the provision of such services is in place; neither of these conditions adequately addresses RTG's concerns. First, notwithstanding the paucity of rural PSAPs capable of processing ALI, to the extent that such PSAPs do exist, the proposed rules would require rural carriers to honor a request for E911 services made by such an entity. Faced with the prospect, however unlikely, of receiving such a request, a carrier will be forced to budget for the possibility of constructing unnecessary additional cell sites. Second, it is highly unlikely that any cost recovery mechanism developed for use in conjunction with E911 would be able to come close to compensating rural carriers for the expense entailed in constructing additional cell sites for the sole purpose of complying with PSAP requests.

Because the proposed requirements are totally inappropriate when applied to rural environments, RTG urges the Commission to craft a blanket exemption from such requirements for covered carriers in rural areas. In the alternative, the Commission should condition enforcement of the new requirements on the rural carrier's technical capabilities. If a carrier is incapable of implementing the required steps by the end of the five-year period, a

² CTIA Comments at p. 16.

waiver of these requirements should be presumed to be in the public interest. RTG urges the Commission to make clear in its order that wireless carriers unable to meet any deadline imposed by the Commission be allowed to justify whatever additional period of time is necessary for the carrier to meet the new obligations given the particular circumstances of the carrier.

Without a concrete exemption for rural carriers, CMRS providers serving rural areas will be forced to make large unnecessary expenditures which will simply result in uneconomic cost increases to their customers, thereby decreasing consumer demand for wireless services and slowing the transition to a fully competitive environment that the Commission and Congress have so long been striving to achieve.³ Ironically, if existing and potential consumers of wireless services deem such services too costly as a result of a Commission mandate to deliver ALI, and therefore elect not to utilize such services, much of the anticipated public interest benefit of expanded E911 capability may be lost.

B. Imposition of a 5 Second Minimum Latency Period and 10 Second Requirement for Location Updates is Overly Burdensome, Unnecessary, and Technically Questionable

RTG also opposes adoption of the minimum latency and location update standards proposed in the FNPRM, at least with respect to rural CMRS providers. RTG is unaware of the existence of any equipment technically capable of meeting the standards proposed by KSI, Inc. of a five second latency period with location updates every ten seconds. To the extent

³ See generally Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Service, Notice of Proposed Rule Making, WT Docket No. 9606, released January 25, 1996; Telecommunications Act of 1996, Conference Report, Joint Explanatory Statement of the Committee of the Conference, Cong. Rec. H1107 (daily ed. Jan. 31, 1996).

such equipment can be developed, there remain serious questions about its affordability and utility. In most instances, emergencies occur at a fixed site, meaning that the location of an emergency caller will not change. Only in the rare instances when an emergency occurs inside a moving vehicle will location update information be useful to emergency response personnel. In rural areas, where the use of ALI is excessive as discussed above, such a requirement is particularly unnecessary.

Although RTG is not opposed to a minimum latency period *per se*, assuming that the necessary equipment exists and is affordable (or reimbursable), the five second benchmark suggested by KSI is unnecessarily stringent. While 911 calls should naturally be transmitted as rapidly as possible, the imposition of an arbitrary requirement will merely add to the cost of employing such a capability, without necessarily adding significantly to response time. As an alternative, RTG suggests that a minimum latency period of ten seconds be used with no legal requirement for location updates.

C. The Monitoring Mechanism Proposed by the Commission is Overly Burdensome and Impractical

The FNPRM asks whether the Commission should establish reporting requirements under which covered carriers would periodically inform the Commission of developments relevant to the provision of E911 services, and whether carriers should then be required to deploy any new technology reported to be available. While RTG understands the Commission's desire to see carriers utilizing state-of-the-art technology in their provision of E911 service, a reporting requirement coupled with a deployment requirement is not the way to bring such utilization about. Carriers should not be required to become experts on scientific advances and product development in the field of wireless communications

technology. For small rural carriers such as RTG's members, such a requirement would prove particularly burdensome. Any requirement that covered carriers then deploy technological advances reported to the Commission is simply unworkable. If the Commission wishes to ensure that carriers are employing state of the art technology, RTG suggests that it conduct a formal inquiry into the state of E911 technology in five years. At that time, the Commission can take an industry survey of the state-of-the-art equipment and impose any additional technical requirements that it deems necessary.

D. The Alliance and FCC Proposals Regarding Access to 911 Service via Multiple Mobile Systems are Fraught With Technical Problems and are Premature

The FNPRM asks for comment on Consumers First and the Ad Hoc Alliance for Public Access to 911's ("Alliance") proposed requirement that 911 calls be sent to the cellular system with the strongest control channel signal. Unfortunately there are a number of technical impediments to this approach. As the Commission recognizes, with the evolution of cellular systems from analog to digital, common air interfaces between cellular systems may no longer exist.⁴ Accordingly, in many instances sending a 911 call to the strongest control channel signal will be technically impossible. In addition, even if both cellular systems in an area utilize the same technology, if a customer chooses to "block" his handset so that only the A side or B side carrier can be accessed, an attempt to send a call to the strongest signal may also be frustrated. Such handsets currently lack the intelligence to recognize the special nature of a 911 call, and thereby override the blocking mechanism. While a requirement imposed on equipment manufacturers to manufacture handsets with such an override

⁴ FNPRM at paragraph 146.

capability may address this problem, it will not solve the problem of incompatible interfaces between analog and digital systems. Only if the Commission wishes to mandate the use of dual mode phones can such a problem be cured. RTG does not believe that the cost to the public of such a mandate warrants its adoption.

For these same reasons, the Commission should reject any suggestion that it require all wireless 911 calls to be handled by any available service, regardless of technology. The incompatible interface problem discussed above is exacerbated when applied to different communications services utilizing different technologies. These technical problems notwithstanding, given the nascency of personal communications service and other advanced wireless technologies, it is premature to adopt any requirement that 911 calls be accessed by multiple mobile systems at this time. Again, the Commission may want to revisit this issue several years from now, after these various technologies have had a chance to develop.

E. Covered Carriers Should Not be Required to Transmit Non-Code Identification 911 Calls Unless Specifically Requested by a PSAP Administrator

Under the rules adopted by the Commission in its Report and Order in this proceeding, covered carriers will, within one-year, be required to transmit to PSAPs 911 calls from wireless handsets that do not transmit a code identification where requested by the PSAP Administrator. The FNPRM now asks whether, within a reasonable time after the one year period, covered carriers should be obligated to transmit all such calls even *without* a request from the PSAP. RTG opposes any such expansion of covered carriers' current obligations. PSAP Administrators are in the best position to determine whether transmission of non code identification calls is necessary. Where a PSAP is incapable of receiving and utilizing the

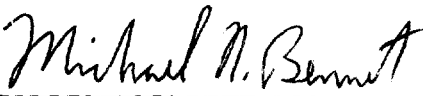
data elements associated with a non code identification call, or otherwise determines that transmission of such calls is inappropriate, wireless carriers should not be required to transmit such calls.

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For the foregoing reasons, RTG respectfully requests that the Federal Communications Commission act in a manner consistent with the views expressed herein.

Respectfully submitted,

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